

## COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

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## **EXECUTIVE COMPLIANCE AGREEMENT**

## UNIVERSITY OF VIRGINIA FOR THE MAIN HEATING PLANT Registration No. 40200

This is an Executive Compliance Agreement ("Agreement") between the University of Virginia ("UVA") and the Virginia Department of Environmental Quality ("DEQ") pursuant to the Director's authority, as set forth in Sections 10.1-1186, 10.1-1307.1 and 10.1-1307.3 of the Code of Virginia, to administer and enforce the Air Pollution Control Law, applicable permit requirements and the Regulations for the Control and Abatement of Air Pollution.

UVA, a public educational institution located in Charlottesville, Virginia operates a main heating plant subject to Title 9, No. 5 of the Virginia Administrative Code. Pursuant to Title 23, Chapter 9 of the Code of Virginia, the Rector and Visitors of UVA are vested with the authority and responsibility to govern UVA. Nothing in this Agreement shall operate to limit such authority of the Rector and Visitors or otherwise violate the laws of the Commonwealth.

UVA was issued a New Source Review permit dated October 19, 2007, ("NSR Permit") and a Title V Operating permit dated November 13, 2004 ("Title V Permit"). UVA's main heating plant operates three coal/gas-fired boilers (boilers #1R, #2R and #5), and two oil/gas-fired boilers (boilers #3R and #4R). A continuous emission monitor system ("CEMS") has been installed to measure and record the concentration of oxides of nitrogen ("NO<sub>2</sub>") emitted from the exhaust stack of each boiler.

Condition 5 of the NSR Permit provides the applicable emissions limitations for Boiler #5 and lists the short-term emissions allowed from the boiler of each applicable pollutant depending on the boiler's firing rate and the fuel burned. Additionally, Condition 5 of the NSR Permit and Condition III.B.15.j.5 and III.D.3 of the Title V Permit require record-keeping and

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reporting of all emissions data and operating parameters necessary to demonstrate compliance with either permit.

On May 13, 2009, DEQ issued a Notice of Violation ("NOV") to UVA for the following alleged violations of the State Air Pollution Control Law and Regulations:

- 1. The second half 2008 Semi-Annual Boiler Report contains data that indicate apparent violations while burning natural gas in Boiler #5. The data indicate that from November 30 through December 31, 2008, the average Nitrogen Oxide (NOx) emission rate was 0.047 lbs/MMBTU, in apparent violation of NSR Permit condition #5 which limits the emission rate to 0.036 lbs/MMBTU.
- 2. The first Quarter 2009 Continuous Emission Monitoring / Excess Emission Report (CEM/EER) Boiler #5 NOx contains data that indicate apparent violations while burning natural gas in boiler number 5. The data indicate that from January 1 through March 31, 2009, each 30-day rolling average calculation for NOx was greater than the permitted limit. The average calculation for this time period was 0.044 lbs/MMBTU, in apparent violation of NSR Permit condition 5 which limits the emission rate to 0.036 lbs/MMBTU.
- 3. The fourth quarter 2008 CEM/EER did not indicate the excedences as required, in apparent violation of Title V Permit condition III.B.15.j.5 and III.D.3.

On April 28, 2009, UVA submitted documentation to the DEQ resolving the record-keeping and reporting issue regarding the identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards.

As of June 18, 2009, the natural gas NO<sub>2</sub> emission rate for Boiler #5 had returned to compliance with the NSR Permit.

Accordingly, UVA and the DEQ have agreed upon the following schedule for corrective action.

By October 31, 2009, UVA shall:

1. Submit an air permit application (Form 7) requesting modified language that will require UVA to identify and to record those time periods during which natural gas is used for the purposes of preheating Boiler #5 for coal-firing as opposed to those time periods during which Boiler #5 is fired on natural gas continuously.

- 2. Program the CEMS unit for Boiler #5 to differentiate between the two uses for natural gas as mentioned in paragraph 1 above.
- 3. Calculate the NO<sub>x</sub> 30-day rolling average in a manner that accounts for the different operating scenarios in paragraph 1 above. Specifically, time periods during which natural gas is used during startup for the purposes of preheating Boiler #5 for coalfiring will be considered as coal-fire emissions and subject to the applicable emission rate of 0.35 lb/MMBtu.
- 4. Create new or revise existing procedural documents that outline proper data management and record keeping requirements for startup periods. Provide training of these new or revised procedures to ensure shift operators understand the difference between the emission limits and data-recording parameters for each scenario in paragraph 1.

The DEQ expects that all of these items will be completed according to the schedule set forth in this Agreement. This Agreement shall become effective upon the date of its execution by the Director of the Department of Environmental Quality or his designee.

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Leonard W. Sandridge,

Date

Executive Vice President and

Chief Operating Officer,

The University of Virginia

David K. Paylor, Director

Va. Department of Environmental Quality

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